Data Analysis Supporting Army Aviation Corrosion Control and Prevention Investment Decisions

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
FEB 2010		**00-00-2010 to 00-00-2010**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Data Analysis Supporting Army Aviation Corrosion Control and Prevention Investment Decisions	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **U.S. Army Aviation & Missile Life Cycle Management Command,G-3,Redstone Arsenal,AL,35898**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES
2010 U.S. Army Corrosion Summit, Huntsville, AL, 9-11 Feb

14. ABSTRACT

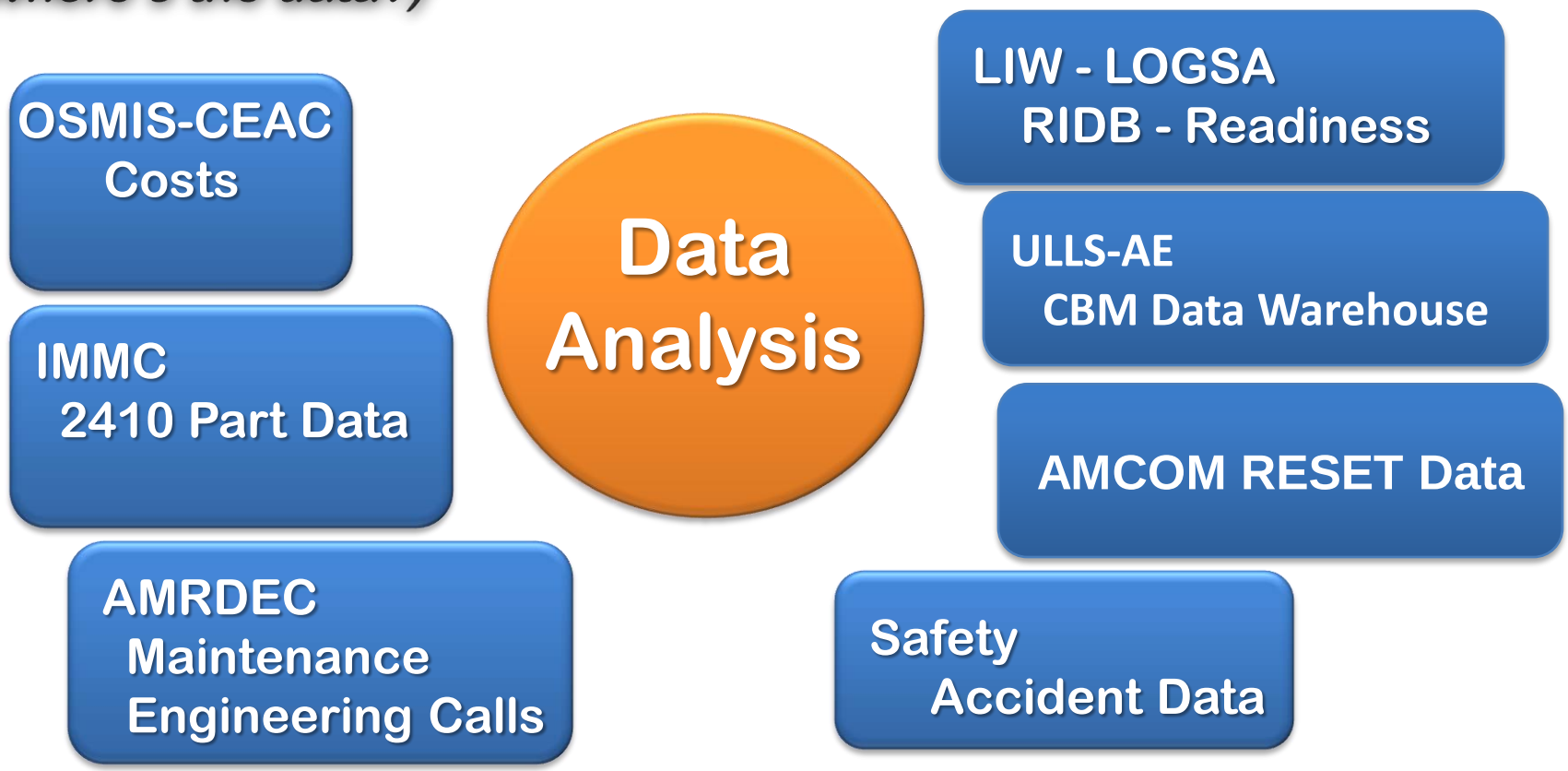
15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**24**	

Corrosion Control - Data Analysis

Data… *challenges & opportunities*

(Where's the data?)



What is the cost and where are the benefits?

OSMIS: OVERVIEW OF THE $$$$$$ PROCESS

Historical Actual $$$$

CEAC Data Base

Cost Analyst

Estimates

Estimates

DA Form 2410

COMPONENT REMOVAL AND REPAIR/OVERHAUL RECORD
For use of this form, see DA PAM 738-751: the proponent agency is DCSLOG

REQUIREMENT CONTROL SYMBOL
CSGLD-1052(R3)

SECTION I - IDENTIFICATION

CONTROL NUMBER	1. NOMENCLATURE	2. NSN	3. PART NUMBER
624882	Engine Gas Turbine	2840-01-070-1003	6035T00G01

4. SERIAL NUMBER	5. CAGE CODE	6. NO. OF PREV O/Hs	7. TIME SINCE LAST INST *(HRS)*	8. TIME SINCE NEW *(HRS)*	9. TIME SINCE OVERHAUL *(HRS)*	10. FAILURE CODE
GEE306591	99207	CC	~~350~~ 0	~~2766~~ 2769	CC	~~317~~ 799

11. POS	12. HSF	13. METER HRS	14. WUC
1			04A

15. COMPONENT CUMULATIVE COUNT/HOURS

a. LCF 1	b. LCF 2	c. TTI	d. OP HOURS
1049 ~~1047~~	7323 ~~7331~~	830 ~~818~~	2769 ~~2766~~

16. APU SSN	17. APU HRS	18. APU SSO	19. VERSION

SECTION III - REPAIR/OVERHAUL/GAIN

20. REMOVED FROM *(NOMEN NHA)*	21. NSN *(NHA)*	22. PART NUMBER *(NHA)*

23. SERIAL NUMBER *(NHA)*	24. HOURS *(NHA)*
	1385

25. NHA CUMULATIVE COUNT/HOURS

a. LCF 1	b. LCF 2	c. TTI	d. OP HOURS

26. APU START METER	27. APU HOUR METER

28. HISTORY RECORDER SN
ECD03595

29. HISTORY RECORDER READING

a. LCF 1	b. LCF 2	c. TTI	d. OP HOURS
274 ~~272~~	1603 ~~1597~~	147 ~~135~~	685 ~~682~~

30. ACFT MODEL	31. ACFT S/N	32. MAINT LEVEL	33. DATE REMOVED	34. UIC *(This Action)*
UH-60A	8023426	O	96128	WOWFAA

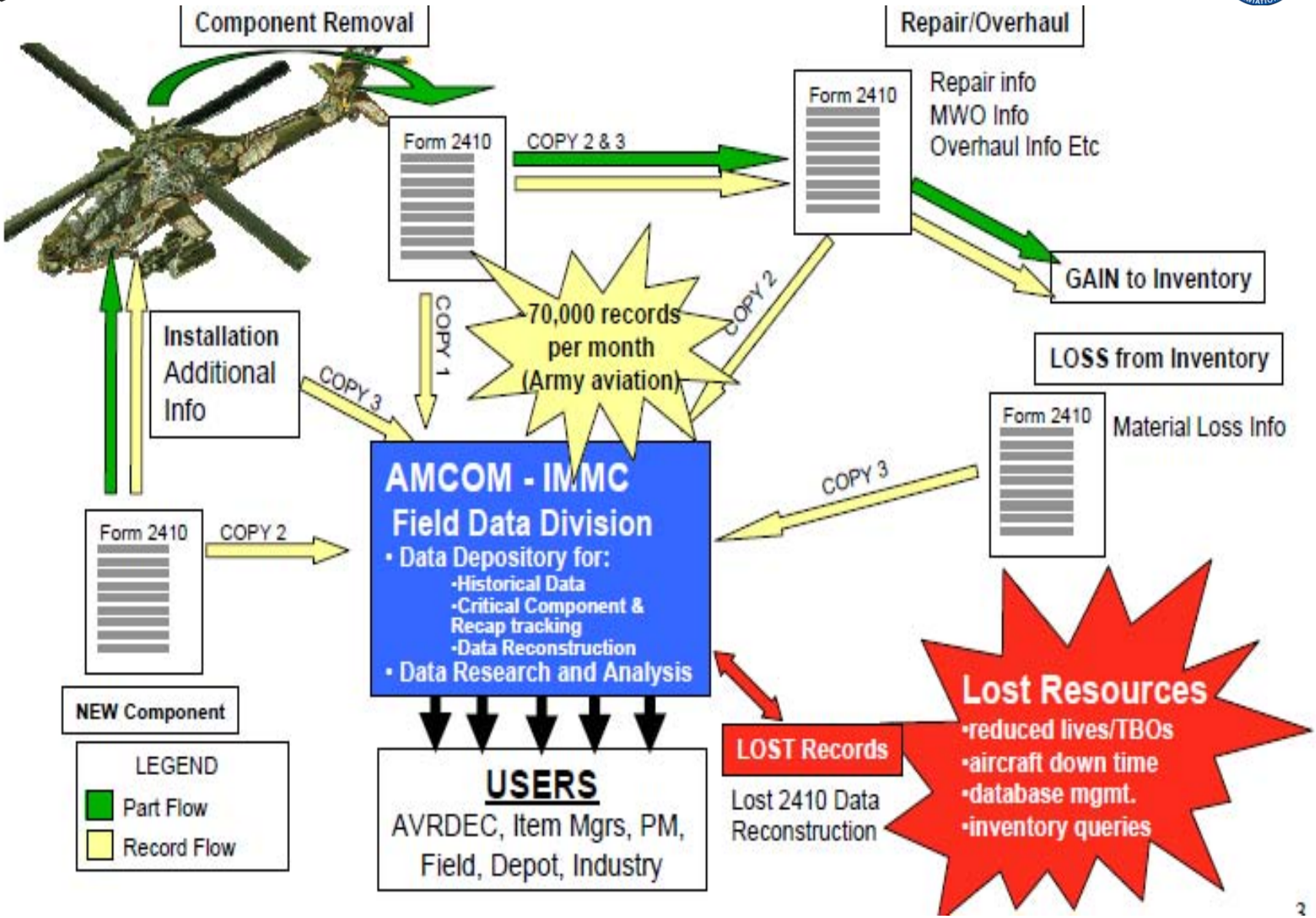
39. DATE CHECKED	40. PID AND TELEPHONE NUMBER	41. UIC *(This Action)*	42. MANHOURS TO REPAIR/ OVERHAUL
96185	AW0980 DSN 861-2361	WOMUAA	203

43. INSPECTION AND ACTION CODES								44. REASON FOR GAIN	45. CONTRACT NUMBER	46. MAINT LEVEL	47. ACT FAIL CODE	48. SRA/ESRA
	(A) SERV			E	(E) REPAIR		(G) REBUILT			D	317	N
	(B) UNSERV		(D) REMFG		(F) O/HAUL							

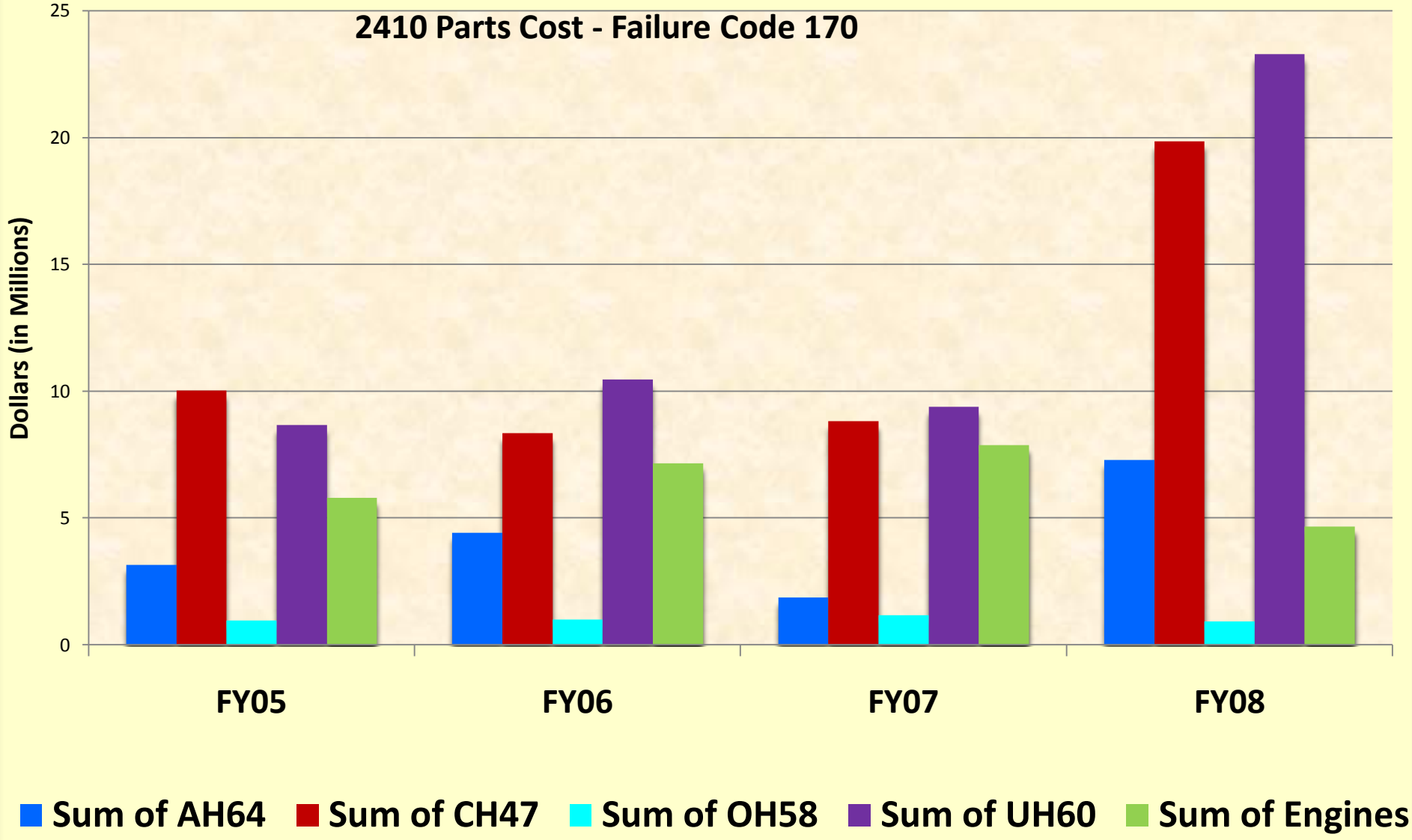
REMARKS

Total cumulative counts and hours calculated by WOWFAA due to history recorder failure.

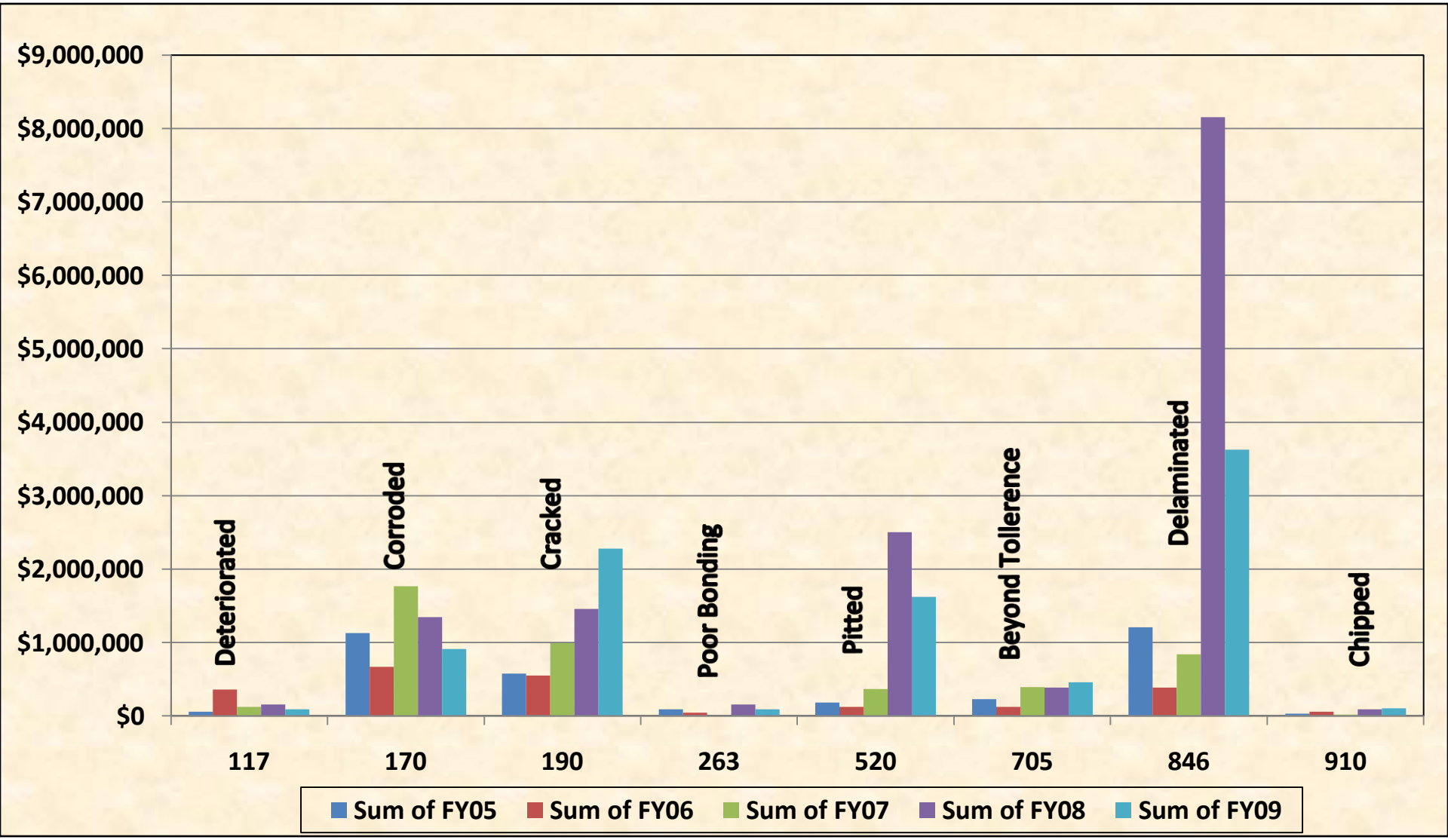
2410 Data Flow



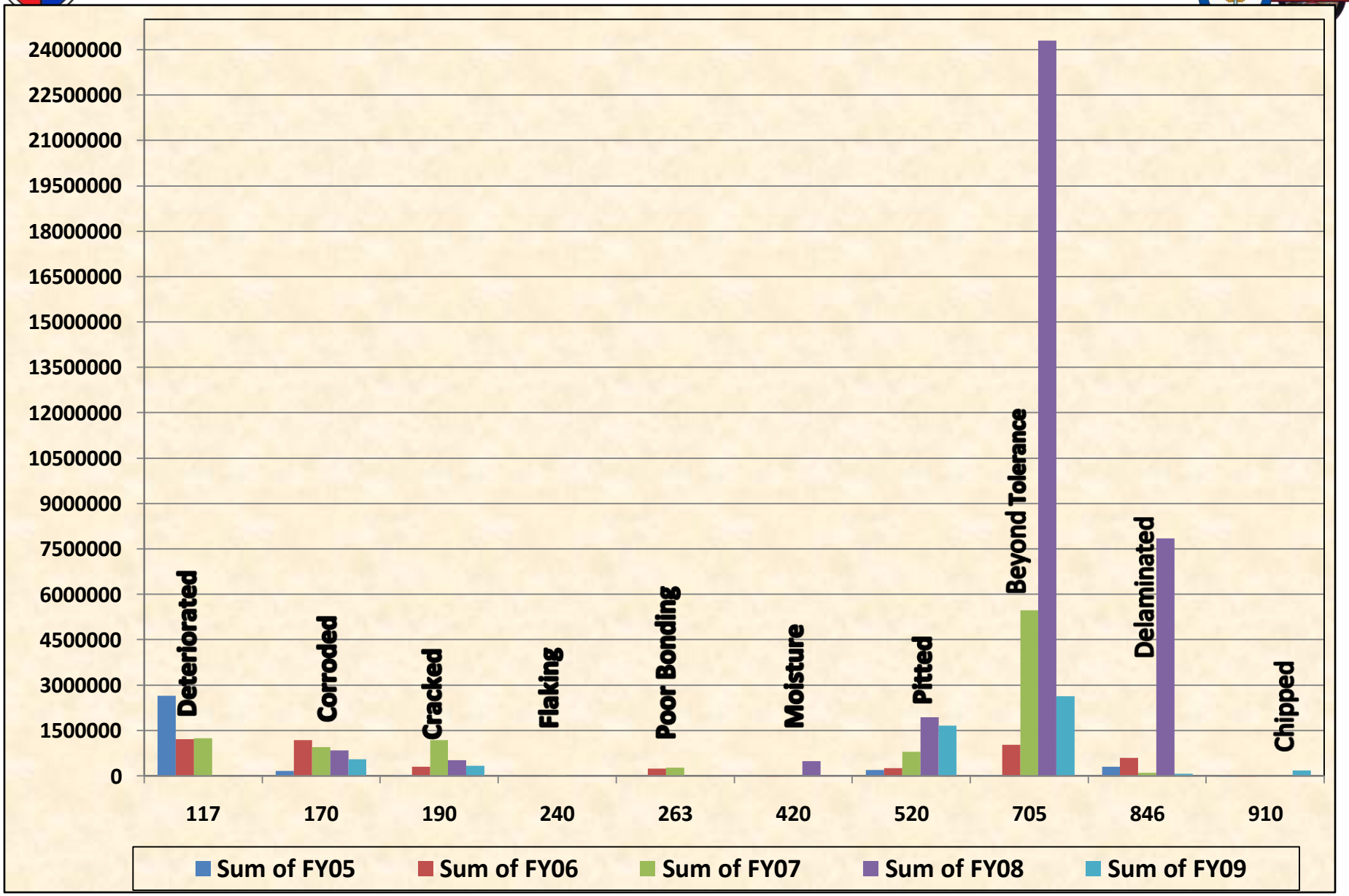
Cost of Aviation 2410 Parts From Corrosion



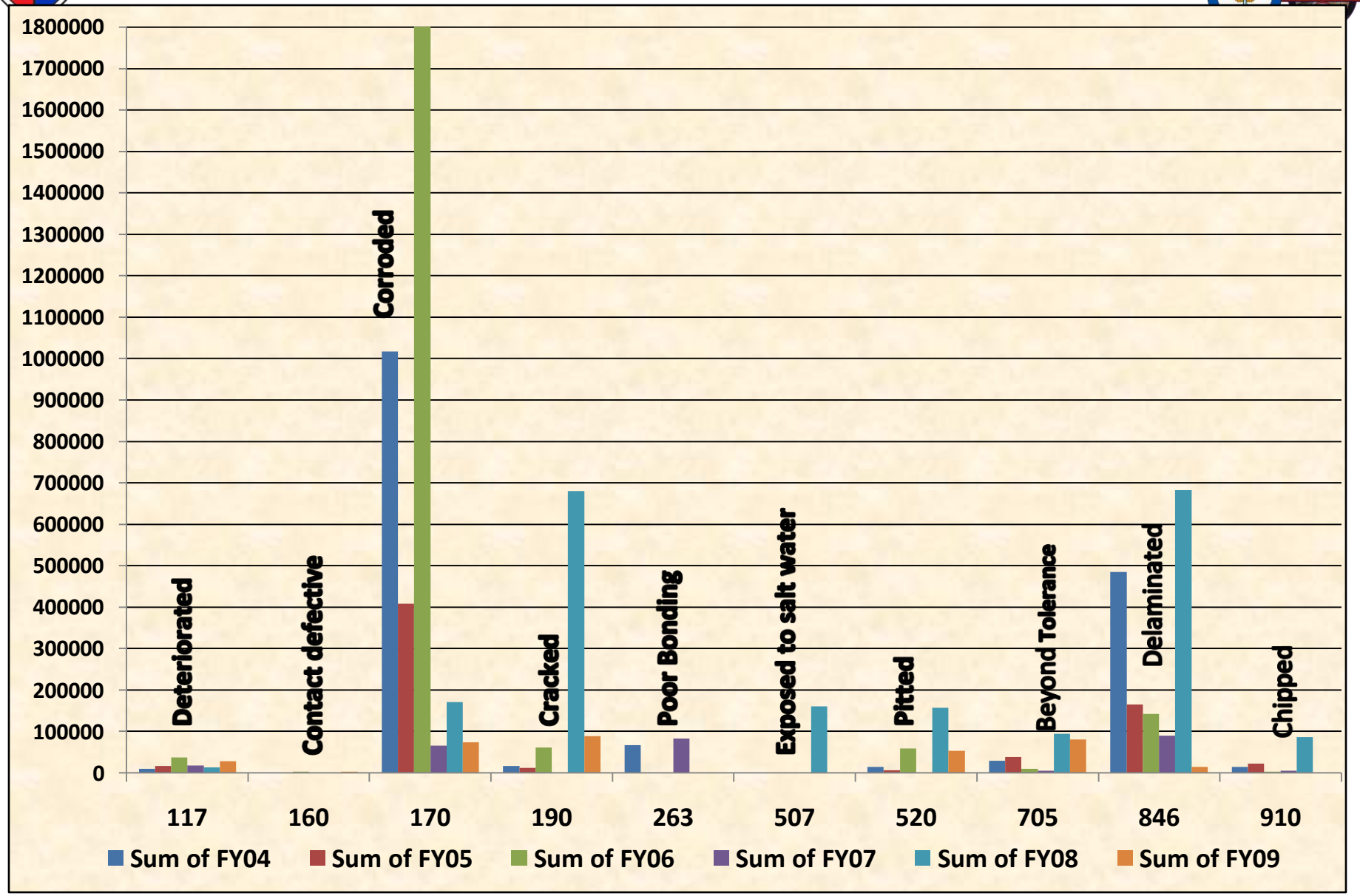
Apache Corrosion Codes from 2410 Data



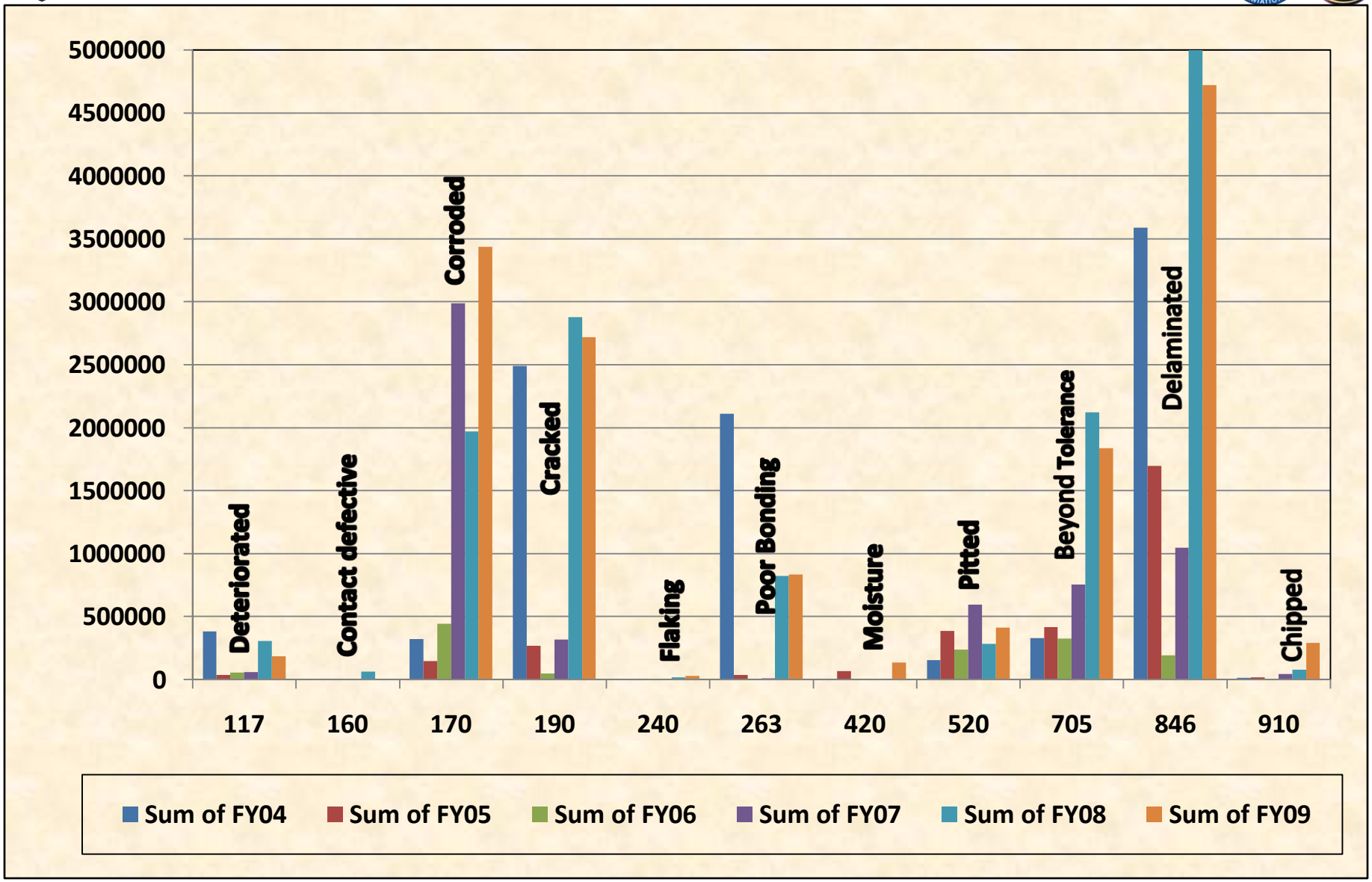
Chinook Corrosion Codes from 2410 Data



KIOWA Corrosion Codes from 2410 Data



Blackhawk Corrosion Codes from 2410 Data



Maintenance Engineering Call (MEC) Data

Requests for engineering assistance or clarification are called Maintenance Engineering Calls (MECs). A MEC can be initiated by depot or field maintenance personnel requesting AMRDEC engineering support and these requests are typically for deviations from standard maintenance procedures, special repairs not clearly outlined in Army maintenance technical manuals, or to resolve Depot Maintenance Work Request (DMWR) inadequacies.

MAINTENANCE ENGINEERING CALL (MEC)

IAW AR 70-62, this MEC will be retained in aircraft historical records and the aircraft logbook, or other applicable historical records, as long as the deviation is in effect.

Shop Submittal Date	Date in Engineering	MEC Number
	29-OCT-09	F100287

AC Type	Tail Number	AC System	AC System S/N
EH-60A	86-24569	AIRFRAME	

AC System Modifier	Government Type
Fuselage structure	ARMY

CSI	CC Affected	TSN	NSN
No	No	6148.9	

Part Number	Serial Number	Nomenclature
70212-02112-155/-157		34.5R O/B Angles

Discrepancy	Tech Pub	Pub fig	Page & Para
Cracked	TM 1-1500-204-23-10		

Contact	Contact Location	Contact Phone	WONO
	Hunter AAF, Savanna	912-315-7944	

AMDF Cost	Repair Cost	Originator	Orig Ph#
	$ 7,200.00		

Problem :

During MEAN phase maintenance inspection found the R/H 34.5 beam to have 1" crack at F.S. 311 W.L. 261.

Request authorization to repair 34.5 beam crack repaired as directed by engineering.

Engineering Disposition :

1). Authorization is granted to AFMA RASM-East, Hunter AAF, Savannah, GA to repair/replace angles, P/N 70212-02112-155/-157, for EH-60A aircraft 86-24569.

2). Reference TM 1-1500-204-23-10 for standard sheet metal practices and OEM Drawing 70212-02112.

3). Prepare the aircraft for repair by:
a). Jack and level
b). Remove major dynamic components from upper deck (i.e. engine and five-pack).

4). Remove (to be replaced) angle P/N 70212-02112-157 and remove minimal amount of fasteners to cut angle P/N 70212-02112-155 at STA 340.

5). NDI 308 tab area for cracks. If found, inform the undersigned for additional instructions.

6). Local fabricate angels P/N 70212-02112-155/-157 AL ALY 7075-T6, 0.63 inches thick.

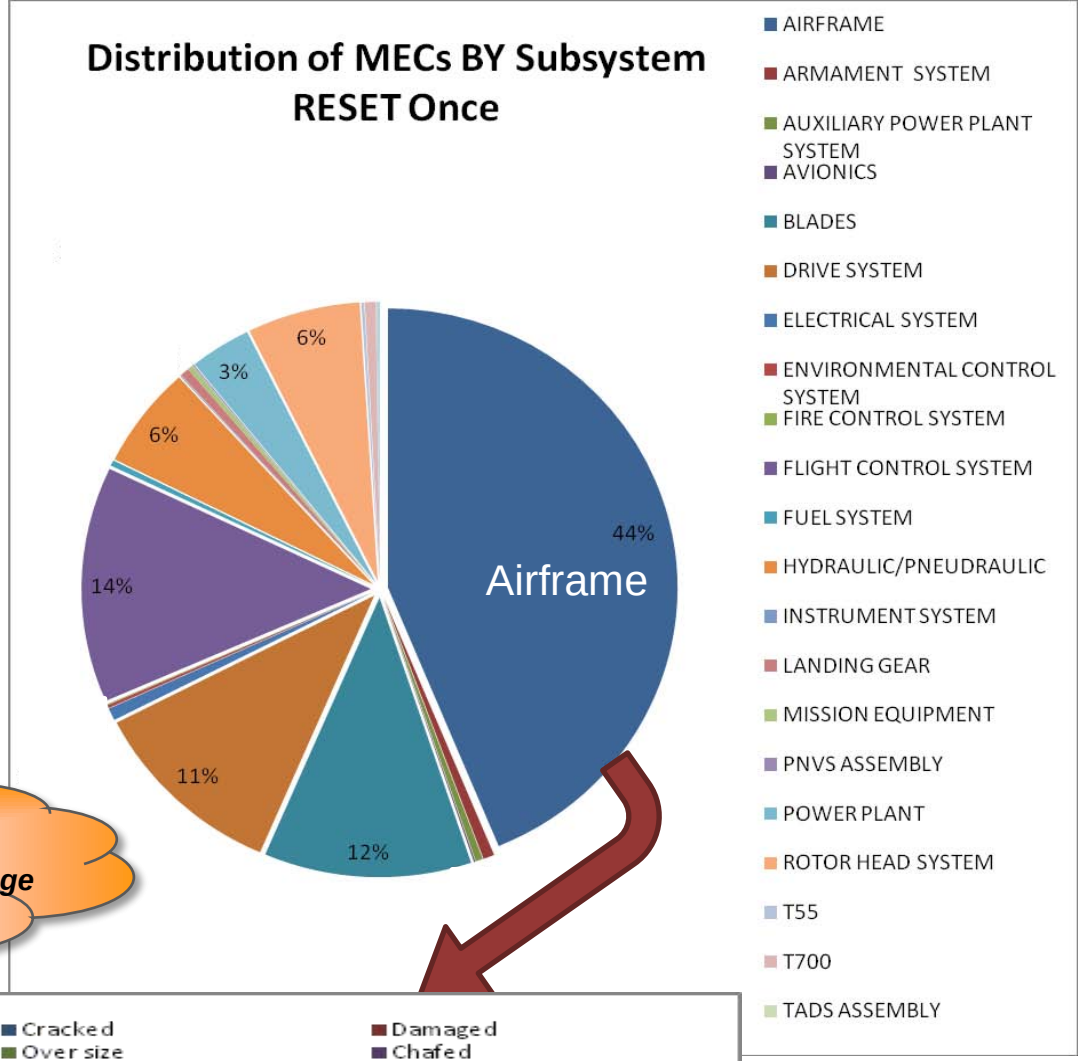
7). Local fabricate splice angle, AL ALY 7075-T6, 0.63 inches thick, to pick up minimum 3 rivets of splice. Joggle splice angle to pickup gusset at STA 343.6.

8). General Notes:
a). Ensure 2D+.03 edge distance. Match drill all existing holes.

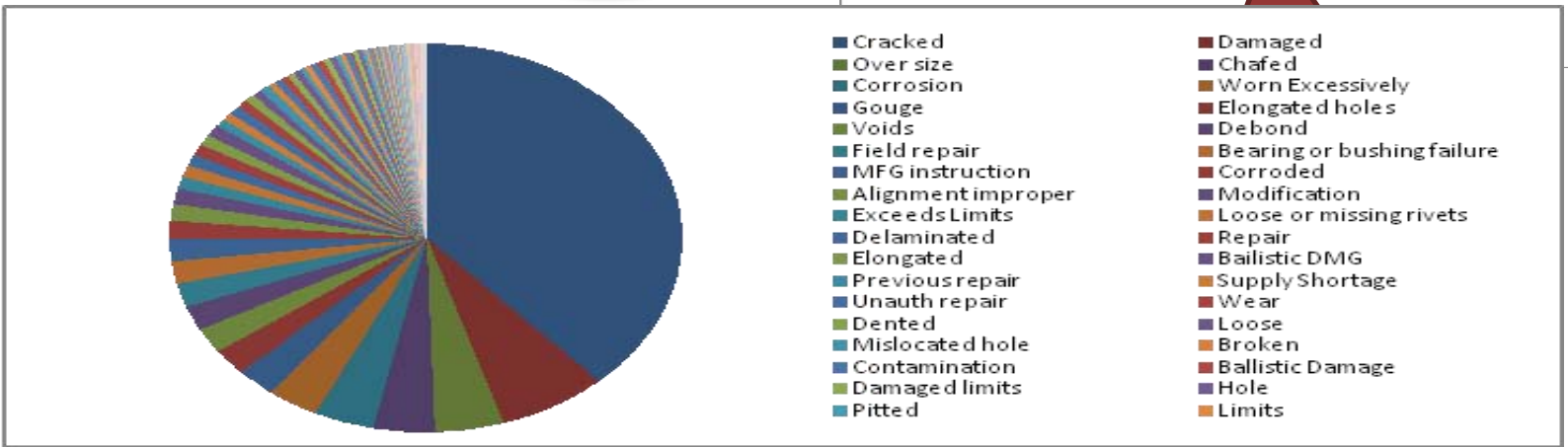
Authorized By:	Authorized On:	Last Addendum Date:	QC STAMP
	29-OCT-09		
Email:		Phone:	Page 1 of2

AMRDEC FORM 127-E, 09,jan 09(REV) rcn :CXR_MEC01v2 Printed on 25-NOV-09

MECs During Aviation RESET



Airframe Structural Issues Represent Greatest Percentage of Defects/Damage Found and Accounted for in MECs



Total Discrepancies Found In Reset (MECs) Total Population –Top 30 Drivers

MECs Related to Cracking or Corrosion

	AH-64A	AH-64D	CH-47D	HH-60L	OH-58D	UH-60A	UH-60L	Grand Total
Cracked	8	122	95	1	109	518	343	1196
Damaged	5	66	121	3	56	158	87	496
Leaking (liquid)	9	46	1	3	3	209	142	413
Corrosion	3	40	132		4	64	46	289
Worn Excessively	10	48	49	2		102	72	283
Debond		17	65		14	84	68	248
Bearing or bushing failure	25	89	16		2	29	22	183
Corroded		10	90		3	19	26	148
Gouge	2	23	31		12	39	38	145
Over size		14	100			14	6	134
Torn		2				79	38	119
Chafed	1	73	9		17	9	10	119
Exceeds Limits	1	2	12		1	37	62	115
Broken	3	15	5	3	2	30	37	95
Elongated holes	4	37	21		3	11	8	84
Alignment improper		7	2	2	3	19	50	83
Voids		3	13		29	5	5	55
Repair	1	7	20		4	14	8	54
Modification		15	5		4	16	13	53
Dented	2	18	8		3	9	12	52
Finish						9	42	51
Delaminated		1	17		22	5	5	50
Erosion						22	28	50
Supply Shortage		38	1			8		47
Limits			4			4	38	46
Deviation		1	19		1	6	19	46
MFG instruction		7	2	1		26	7	43
Field repair		29	1		3	6	3	42
Wear		23	3			2	11	39
Stripped		1	3	1	9	8	15	37

LIW - Readiness Integrated Data Base (RIDB). Source: LOGSA

ARMY AIRCRAFT INVENTORY, STATUS AND FLYING TIME
For use of this form, see AR 700-138; the proponent agency is DCSLOG

1. PERIOD ENDING	2. PAGE NO.	3. NO. OF PAGES	REQUIREMENT CONTROL SYMBOL
15 Sep 95	1		CSGLD-1837(R1)

4. ORGANIZATION	5. TELEPHONE (Comm/DSN)	6. UNIT IDENTIFICATION CODE	7. (Do not write in this space)
HQ 1ST BN, 1ST AVN REGT, 82ND ABN DIV	DSN 236-2260	WDFJAA	

8. POST, CAMP, STATION	9. COMMAND
FORT BRAGG, NC 28307	FORSCOM

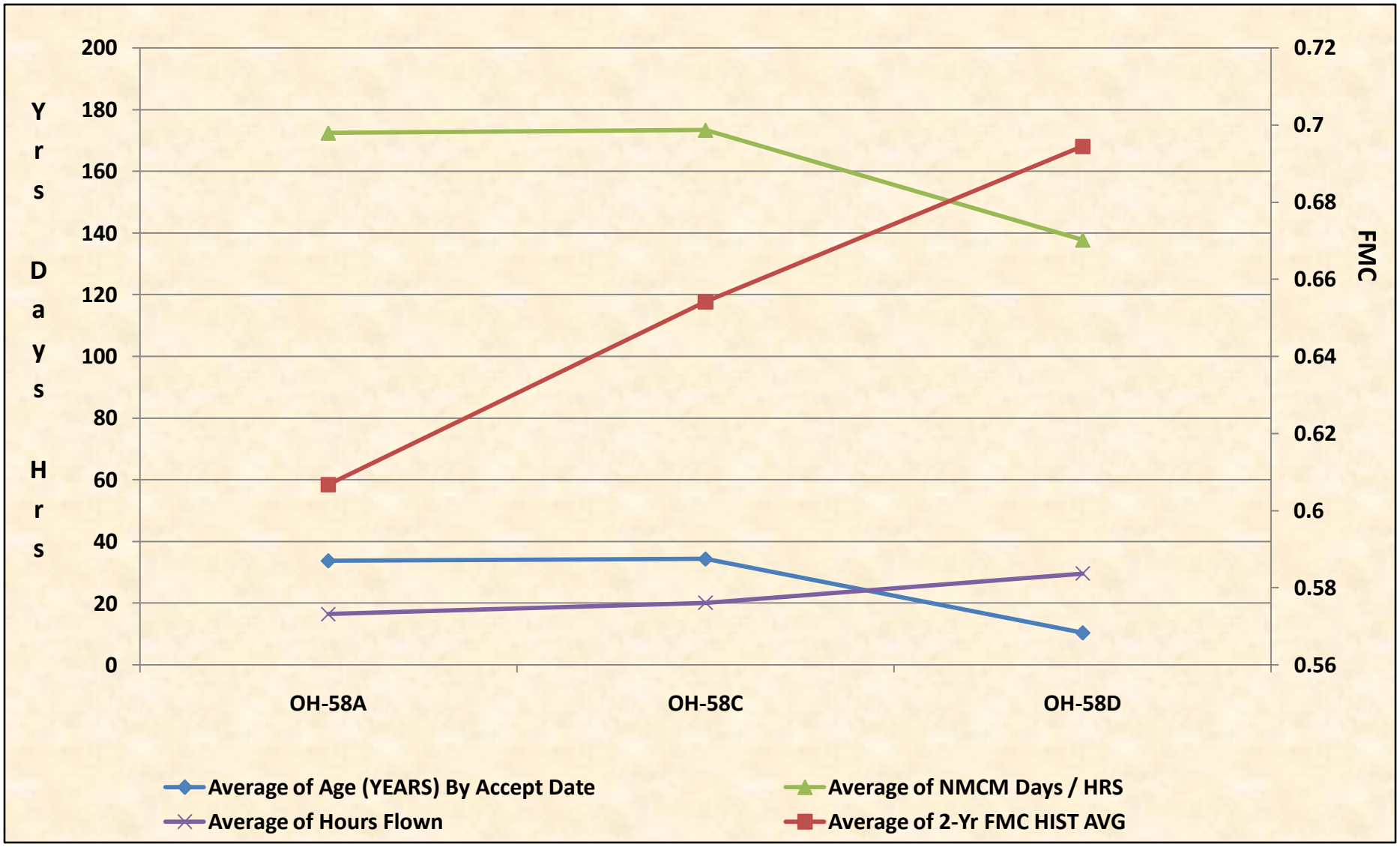
10. SUMMARY DATA

MISSION DESIGN SERIES	SERIAL NUMBER	ASSIGNMENT AND FUNCTIONAL CODE	HRS. ON HAND DURING REPORT PERIOD	MISSION CAPABLE			NOT MISSION CAPABLE				HOURS FLOWN DURING MONTH	NUMBER OF LANDINGS / TOUGHDOWN AUTO-ROTATIONS	GAINED OR LOST
				FMC	PMC		NMCS	NMCM					
					PMCM	PMCS		DEPOT	AVIM	AVUM			
a	b	c	d	e	f		g	h	i	j	k	l	m
AH64A	87-0482	AGA	744	417	C2/11		186	0	0	130	18	13/0	
AH64A	87-0483	AGA	744	187		A2/13	0	0	0	544	10	4/0	
AH64A	87-0484	AGA	744	711		A30/25	0	0	0	8	32	44/0	
UH60L	91-09790	BGC	744	629	D2/4	C52/4	0	0	40	67	29	52/0	
OH58D	87-00729	AGA	744	133			71	540	0	0	03	14/0	
OH58D	87-00737	AGA											LT
OH58D	89-00086	AGA	744	462			166	0	0	116	37	54/0	GT

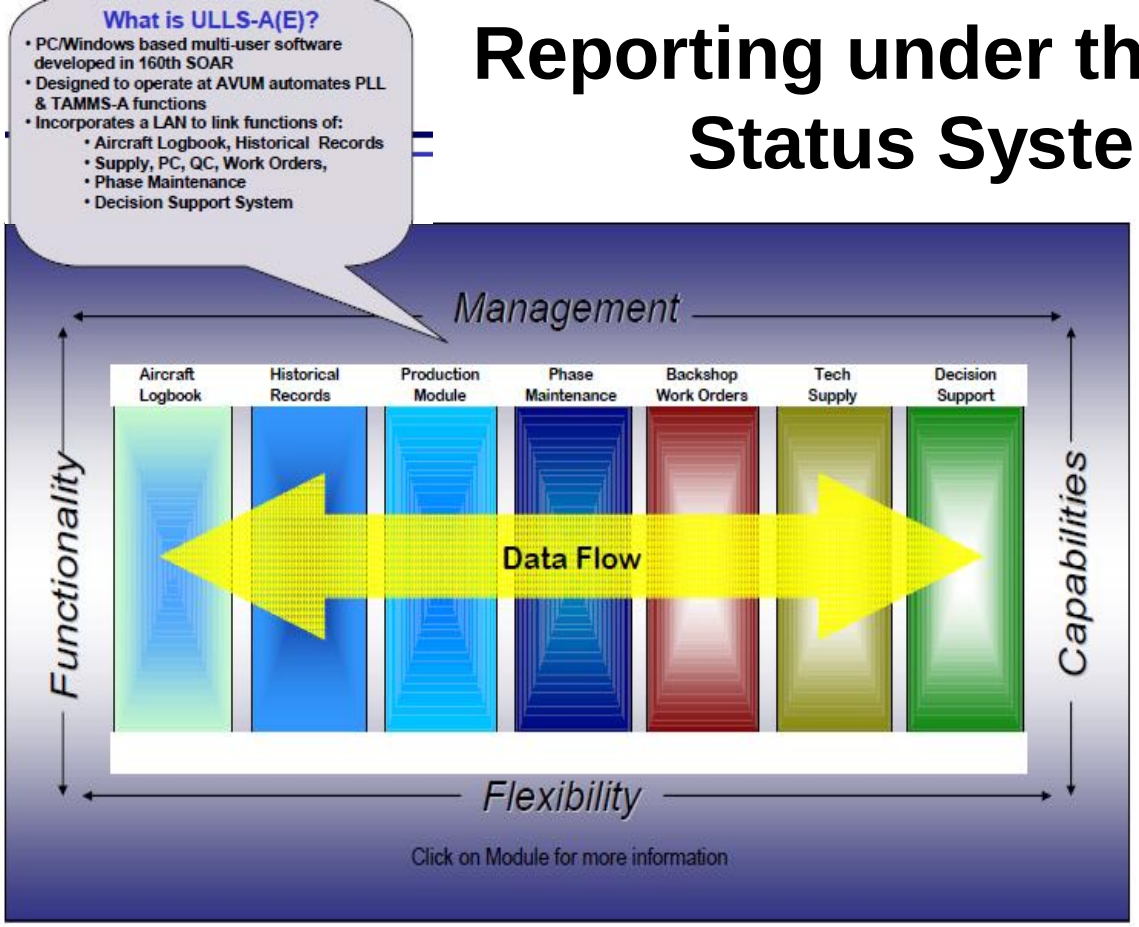
11. TYPED OR PRINTED NAME, GRADE, AND POSITION OF AUTHENTICATING OFFICER	12. SIGNATURE
JOSEPH R. HOWELL, LTC AV COMMANDING	Joseph R. Howell, LTC

DA FORM 1352, APR 93 EDITION OF 1 OCT 79 IS OBSOLETE USAPPC V1.00

RIDB Example



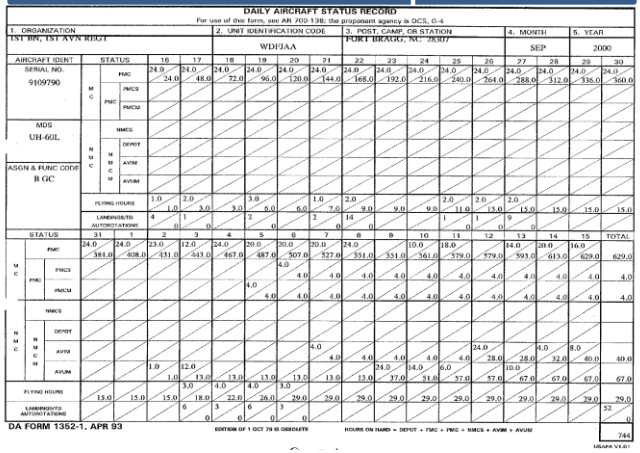
Reporting under the Army Materiel Status System (AMSS)



a. ***Once fielded with the Unit Level Logistics System (ULLS), the reporting unit will no longer report materiel*** **condition status on the hardcopy DA Form 2406, DA Form 3266–1, and DA Form 1352**. The Army Materiel Status 6 AR 700–138 • 26 February 2004 System (AMSS), an integral part of ULLS/SAMS 1/SAMS 2, is designed to accumulate the necessary transactions/ status changes at unit and support levels during the report period (16th day/0001 hours of the month to the 15th day/ 2400 hours of the following month). At the end of the report period (defined as 2400 hours on the 15th day of the month) , ULLS AMSS will process these transactions/status changes and produce an output (file named “awame130.dat”) that is equivalent to the “front side” data on the current hardcopy forms. The equivalent “back side” information on the current hardcopy forms is generated as each NMCS part is ordered at the unit and/or support levels. Data are passed from ULLS through SAMS–1 and is collected by the SAMS 2, which is located at the supporting materiel management center, (for example, Division Materiel Management Center (DMMC), Brigade Materiel Management Center (BMMC), and so forth). This data (readiness and NMCS) will be transmitted by Active Army units and arrive at LOGSA not later than 2400 hours on the 7th workday (excludes weekends and U.S. Federal holidays) following the end of the report period. National Guard and Reserve unit reports are due to LOGSA by the 1st day ofthe month following the end of the report period. Reports will be transferred to LOGSA electronically via the SAMS–2 LOGSA interface (SAMS–2) diskette/COMM transfer process), or output data will be produced on floppy disks.

ULLS-A (E) READINESS REPORTING

Aircraft Status Report 1352



DAILY AIRCRAFT STATUS RECORD

For use of this form, see AR 700-138; the proponent agency is DCS, G-4

1. ORGANIZATION	2. UNIT IDENTIFICATION CODE	3. POST, CAMP, OR STATION	4. MONTH	5. YEAR
1ST BN, 1ST AVN REGT	WDH3AA	FORT BRAGG, NC 28307	SEP	2000

AIRCRAFT IDENT	STATUS	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
SERIAL NO. 9109790	MC PMC	24.0 / 24.0	24.0 / 48.0	24.0 / 72.0	24.0 / 96.0	24.0 / 120.0	24.0 / 144.0	24.0 / 168.0	24.0 / 192.0	24.0 / 216.0	24.0 / 240.0	24.0 / 264.0	24.0 / 288.0	24.0 / 312.0	24.0 / 336.0	24.0 / 360.0
	MC PMC PMCS															
	MC PMC PMCM															
MDS UH-60L	NMC NMCS															
	NMC NMCM DEPOT															
ASGN & FUNC CODE B GC	NMC NMCM AVIM															
	NMC NMCM AVUM															
	FLYING HOURS	1.0	2.0	3.0	6.0	6.0	7.0	9.0	9.0	9.0	11.0	13.0	15.0	15.0	15.0	15.0
	LANDINGS/TO AUTOROTATIONS	4 / 1 / 0		2 / 0			2 / 0	14 / 0			1 / 0		9 / 0			

STATUS	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
MC PMC	24.0 / 384.0	24.0 / 408.0	23.0 / 431.0	12.0 / 443.0	24.0 / 467.0	20.0 / 487.0	20.0 / 507.0	20.0 / 527.0	24.0 / 551.0	24.0 / 551.0	10.0 / 561.0	18.0 / 579.0	24.0 / 579.0	14.0 / 593.0	20.0 / 613.0	16.0 / 629.0	629.0
MC PMC PMCS						4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
MC PMC PMCM					4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
NMC NMCS																	
NMC NMCM DEPOT								4.0									
NMC NMCM AVIM								4.0	4.0	4.0	4.0	4.0	24.0 / 28.0	4.0 / 32.0	8.0 / 40.0	40.0	40.0
NMC NMCM AVUM	1.0		1.0	12.0 / 13.0	13.0	13.0	13.0	13.0	24.0 / 37.0	14.0 / 51.0	6.0 / 57.0	57.0	10.0 / 67.0	67.0	67.0	67.0	67.0
FLYING HOURS	15.0	15.0	15.0	3.0 / 18.0	4.0 / 22.0	4.0 / 26.0	3.0 / 29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
LANDINGS/TO AUTOROTATIONS				6 / 0	3 / 0	6 / 0	3 / 0										53 / 0

DA FORM 1352-1, APR 93 — EDITION OF 1 OCT 78 IS OBSOLETE — HOURS ON HAND = DEPOT + FMC + PMC + NMCS + AVIM + AVUM — USAPA V1.01

744

LOGSA

ULLS-A (E)
AVUM

1352/READINESS DATA

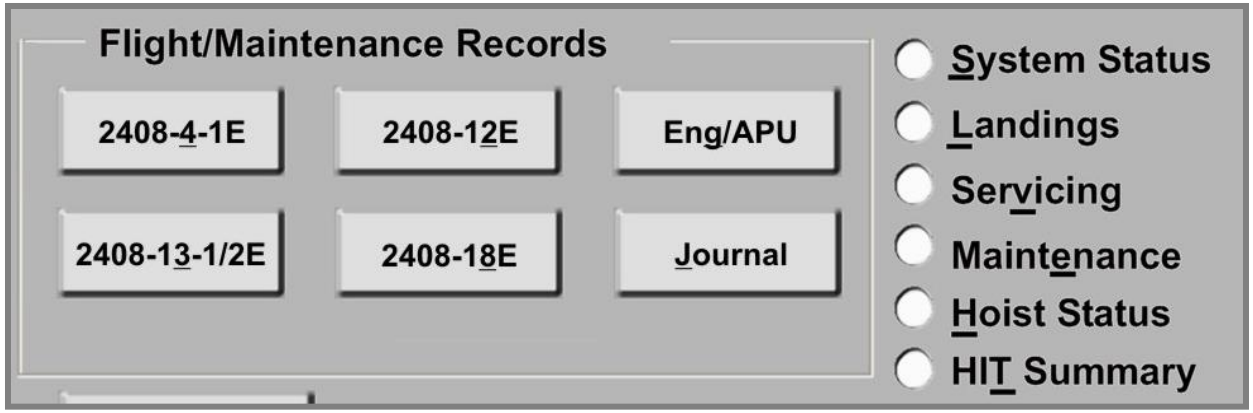
FRONTSIDE AND BACKSIDE DATA

FILES UPLOADED DIRECTLY TO LOGSA LIW.

AUTHORITY: CHAPTER 3, AR 700-138

ULLS A(E): Automated Forms and Records

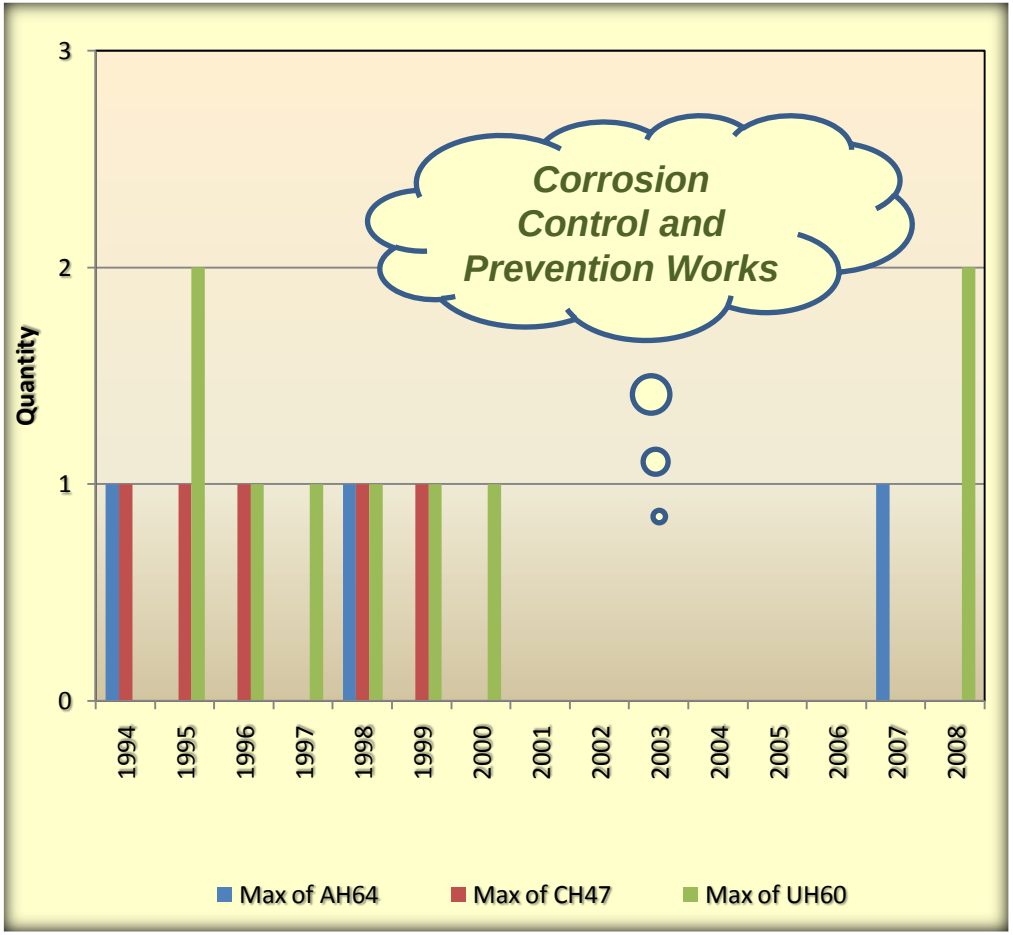
- DA Form 759 Series Individual Flight Record and Certificate – Army
- DA Form 1352 Series Army Aircraft Inventory, Status and Flying Time
- DA Form 2405 Maintenance Request Register
- DA Form 2407 Series Maintenance Request
- DA Form 2408-4 Series Weapon Record/Sighting Data
- DA Form 2408-5 Series Equipment Modification Records
- DA Form 2408-12 Army Aviators Flight Record
- DA Form 2408-13 Series Aircraft Status Information/Maintenance Records
- DA Form 2408-15 Series Aircraft Historical Records
- DA Form 2408-16 Series Aircraft Component Historical Records
- DA Form 2408-17 Aircraft Inventory Record
- DA Form 2408-18 Equipment Inspection List
- DA Form 2408-19 Series Aircraft Engine Historical Records
- DA Form 2408-20 Oil Analysis Log
- DA Form 2408-31 Aircraft Identification Card
- DA Form 2408-33-R Meter Tracked Component Record
- DD Form 2026 Army Oil Analysis Request
- DA Form 714A Engine Historical Record
- OH-58D/719 Side/Transverse Roof Beam Retirement Life Worksheet



ARMY AVIATION

Safety: Corrosion Related Incidents by FY

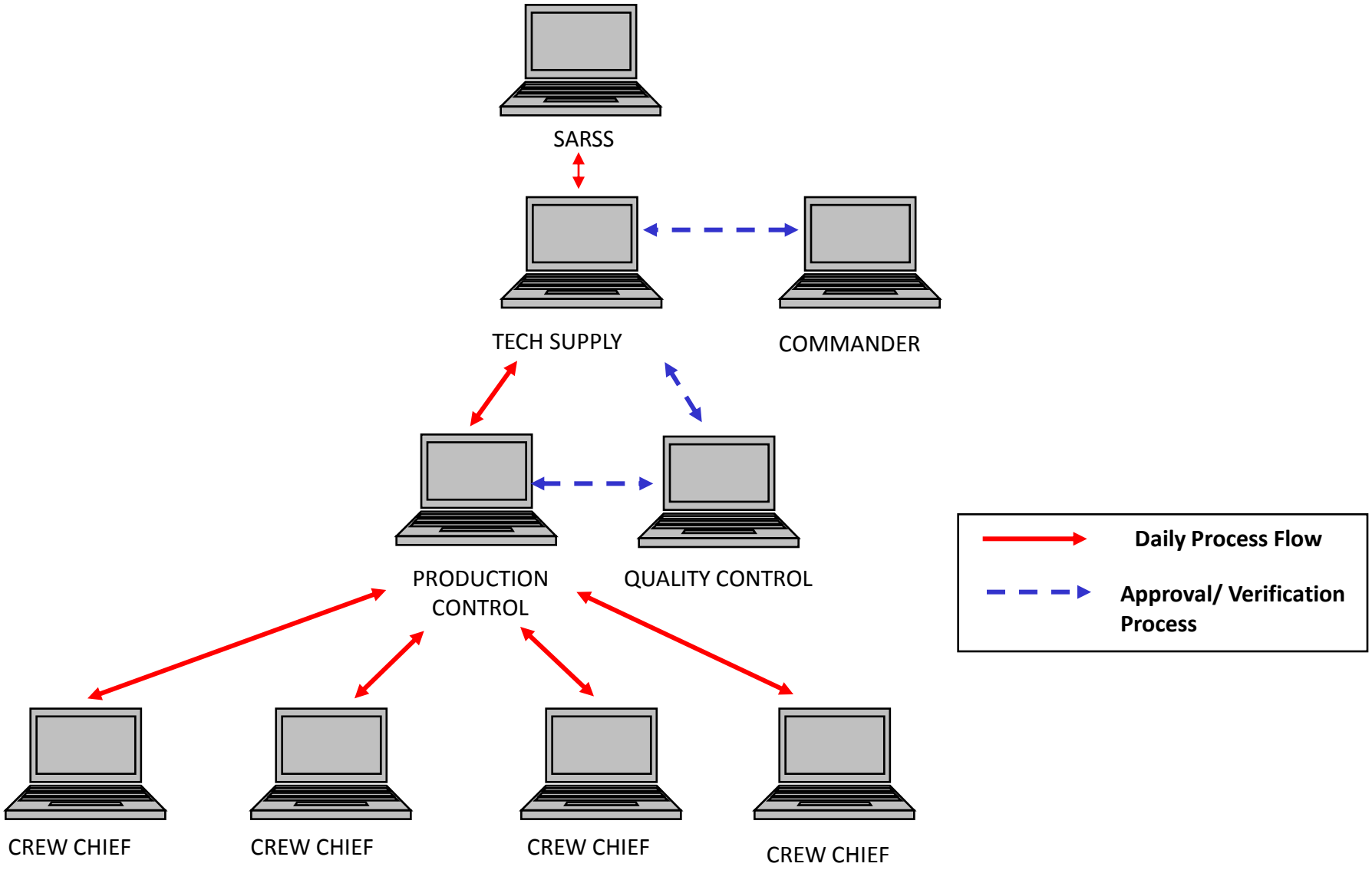
FY	MDS	Case Number	AMC
1994	CH47D	19940111008	D
	AH64A	19940214001	A
1995	CH47D	19950212003	E
		19950726001	C
	MH60A	19950730002	C
	UH60	19950820002	E
1996	CH47D	19960611006	E
	UH60	19951016005	E
		19960219004	E
1997	UH60	19970529016	E
		19970723004	E
1998	AH64A	19980117001	C
	CH47D	19971103001	C
	UH60	19980107001	E
1999	CH47D	19990224010	C
	UH60	19981026001	C
2000	UH60	19991124003	E
2007	UH60	20070827003	E
2007	AH64	20070824001	E
2008	UH60	20080320003	E
2008	UH60	20080208001	C



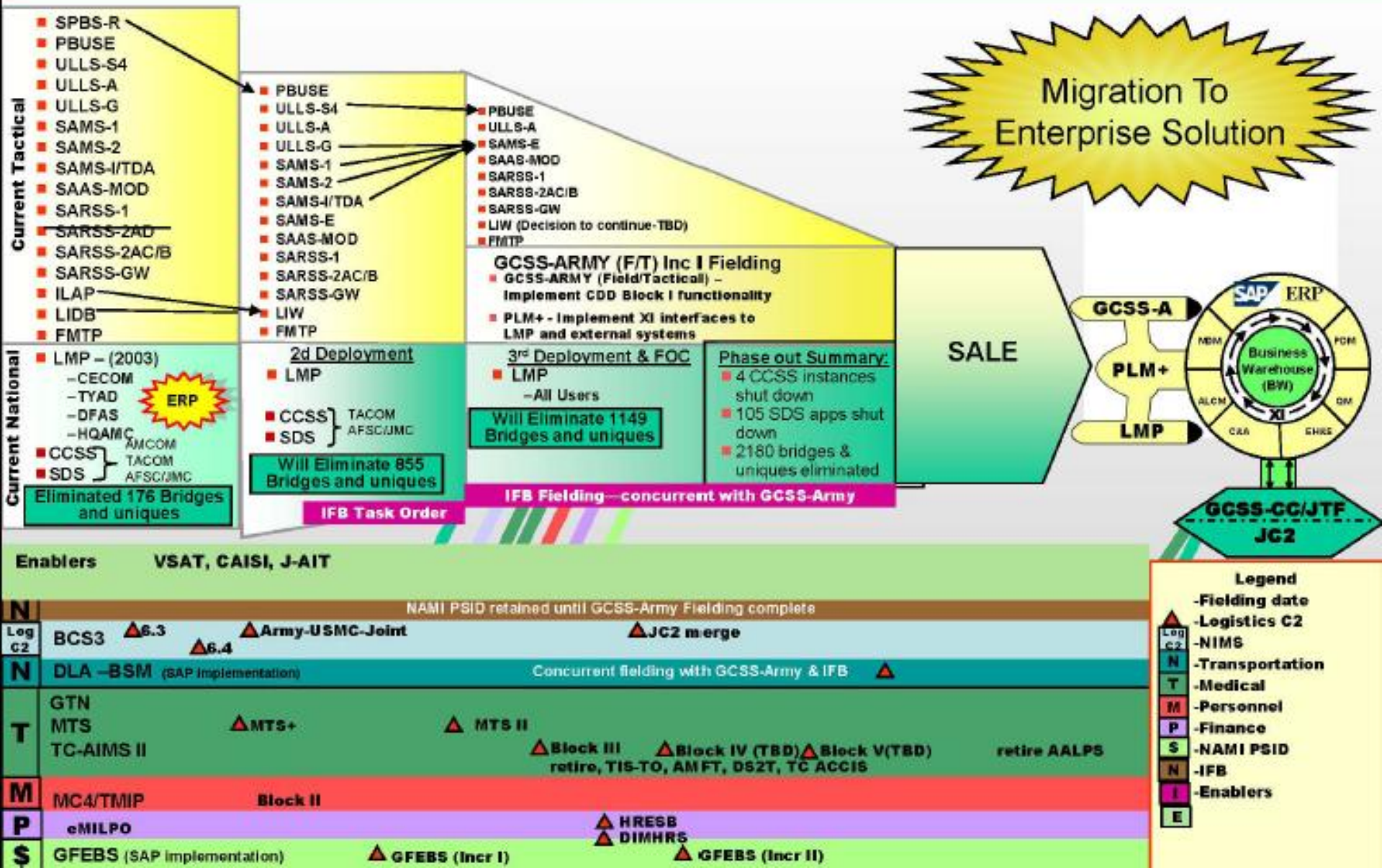
Recommend Full Funding: ZERO Class A Corrosion Accidents since 1994! A direct result of the CPC Program

Back-up Slides

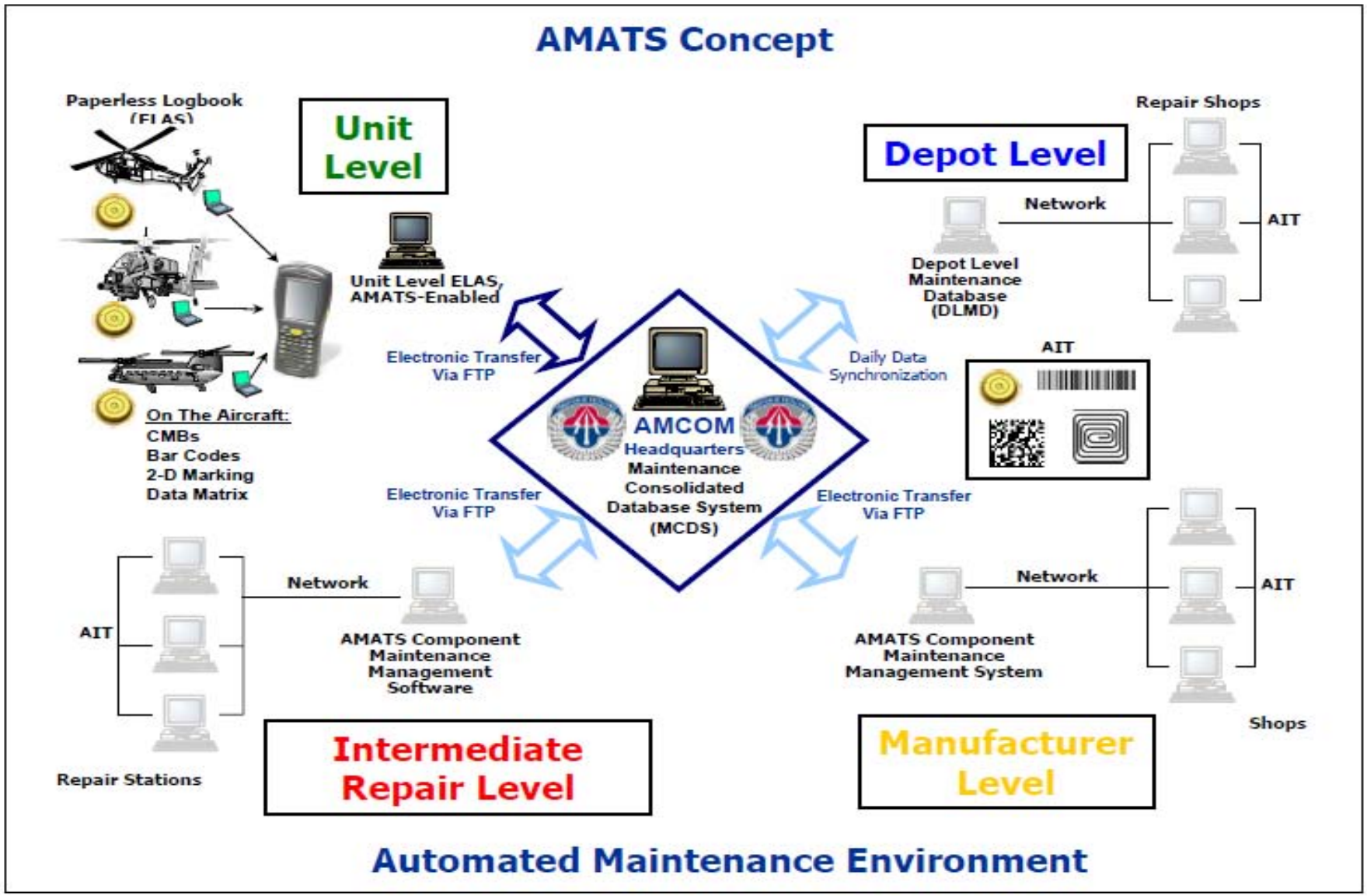
Tech Supply Role Interface Chart



Enterprise Logistics Automation Transition Plan.. Path to One Logistics Integrated Enterprise . . .



Aviation Maintenance Automated Tracking System (AMATS)



The Road Ahead

We know that $s driving change and that ----is driving ---- and ----…

…It’s up to us to make sure that we have the right destination and the maps to get us there!